

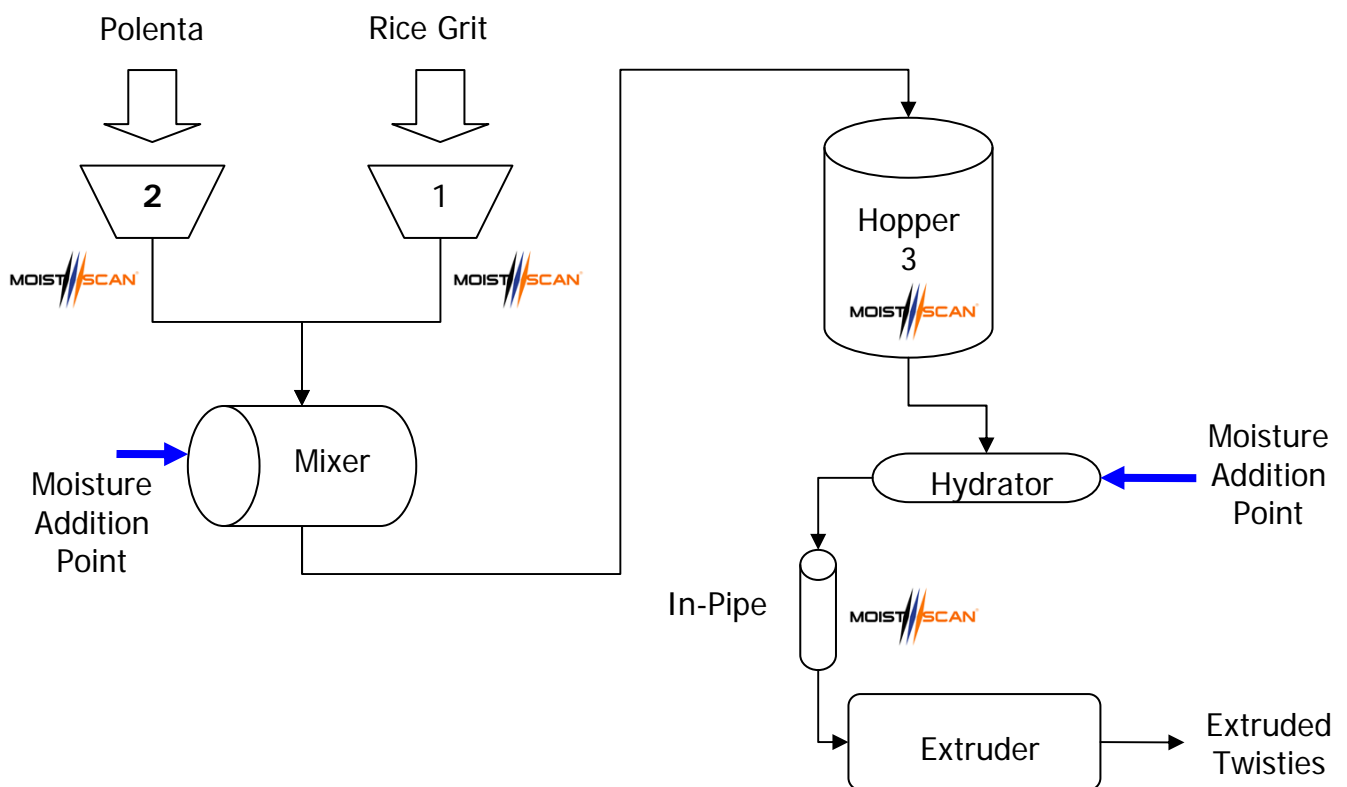
Moisture Analysers at major Snack Food producer

Brisbane, Qld

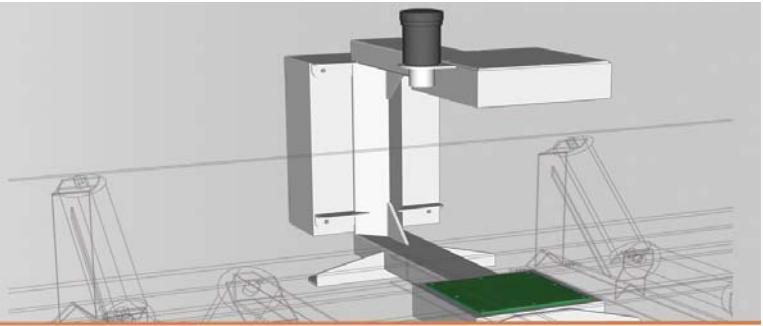
A major snack food producer in Tingalpa, Brisbane has recently installed multiple MoistScan® moisture analysers to their Snack Food production process prior to extrusion of the product.

This product is one of Australia’s major snack foods which contain a mixture of polenta (corn) and rice, which is then extruded and seasoned.

Application



The batch process starts by taking Polenta and Rice Grit, mixing it 3:1 and adding moisture. The wet mix is then fed to the Hopper where more water can be added. From the hopper the mixture is fed through the



hydrator which is the final point in the process where moisture is added. Finally the mixture passes through the in-pipe moisture analyser before being extruded.

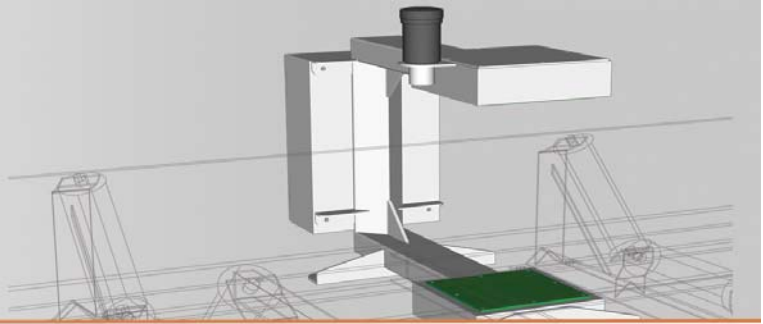
The first 2 analysers are in place to monitor the moisture of the incoming Polenta and Rice grit and to see that it is within spec. The Hopper and In-pipe analysers are in place to monitor the moisture of the mixture and from this measurement control the water addition to the process to maintain the desired product specification.

Results

1.) Bulk Bag application – Rice and Polenta Moistscan applications



Moistscan application of both Polenta and rice hoppers



Rice Calibration using 3 prepared samples

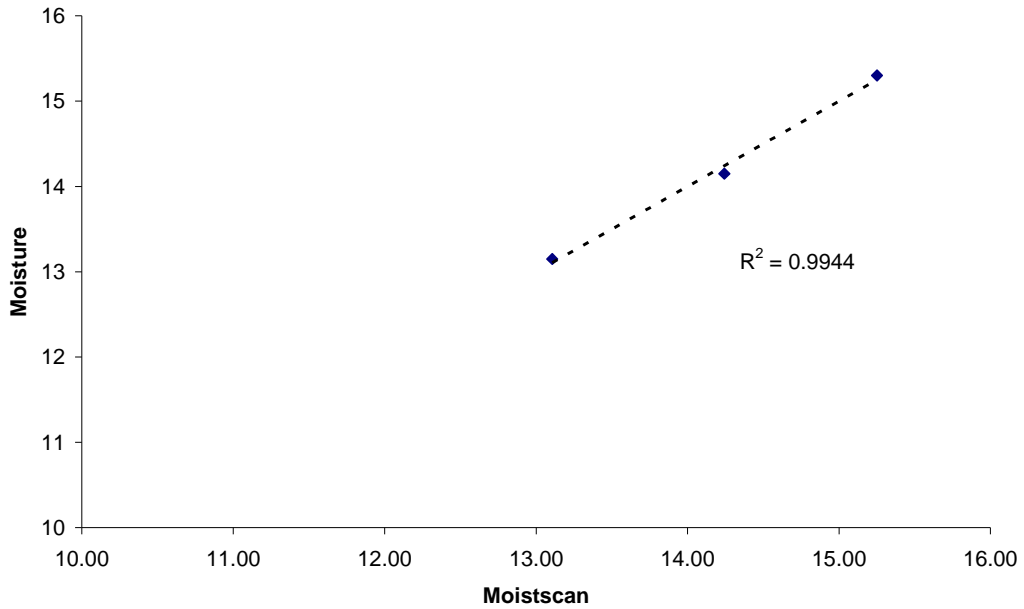


Figure 1: Calibration data for Rice samples presented to the analyser

Polenta Calibration using 3 prepared samples

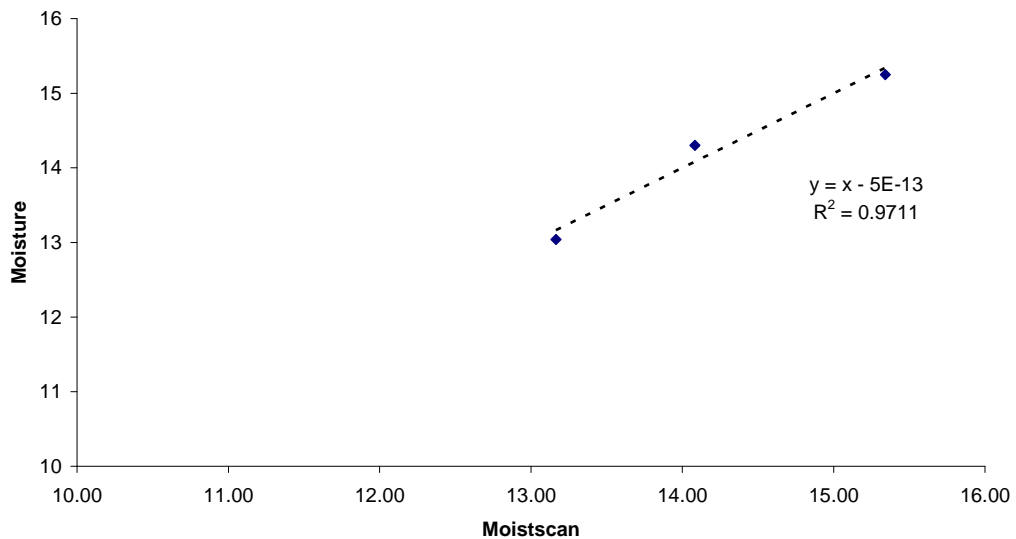
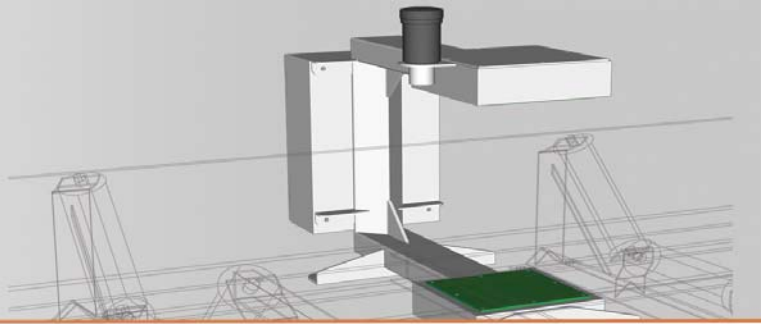


Figure 2: Calibration data for Polenta samples presented to the analyser



2.) Extruder application – Rice and Polenta mixture

The MA-700 in-pipe analyser is extremely important to the operation of the extruder. The hydrator basically controls the water addition to the polenta/rice mix entering the extruder. If the water content of the polenta/rice mix is too high (19%) the extruder gives skinny Twisties (bad for quality), if the moisture is too low (16%) the extruder is prone to clogging and operation stops. 18% moisture +/- 0.5% is critical to twisty quality.

Sixteen samples were taken just prior to when the product falls into the extruder and just after the hydrator. The results are shown below for both phase and attenuation.

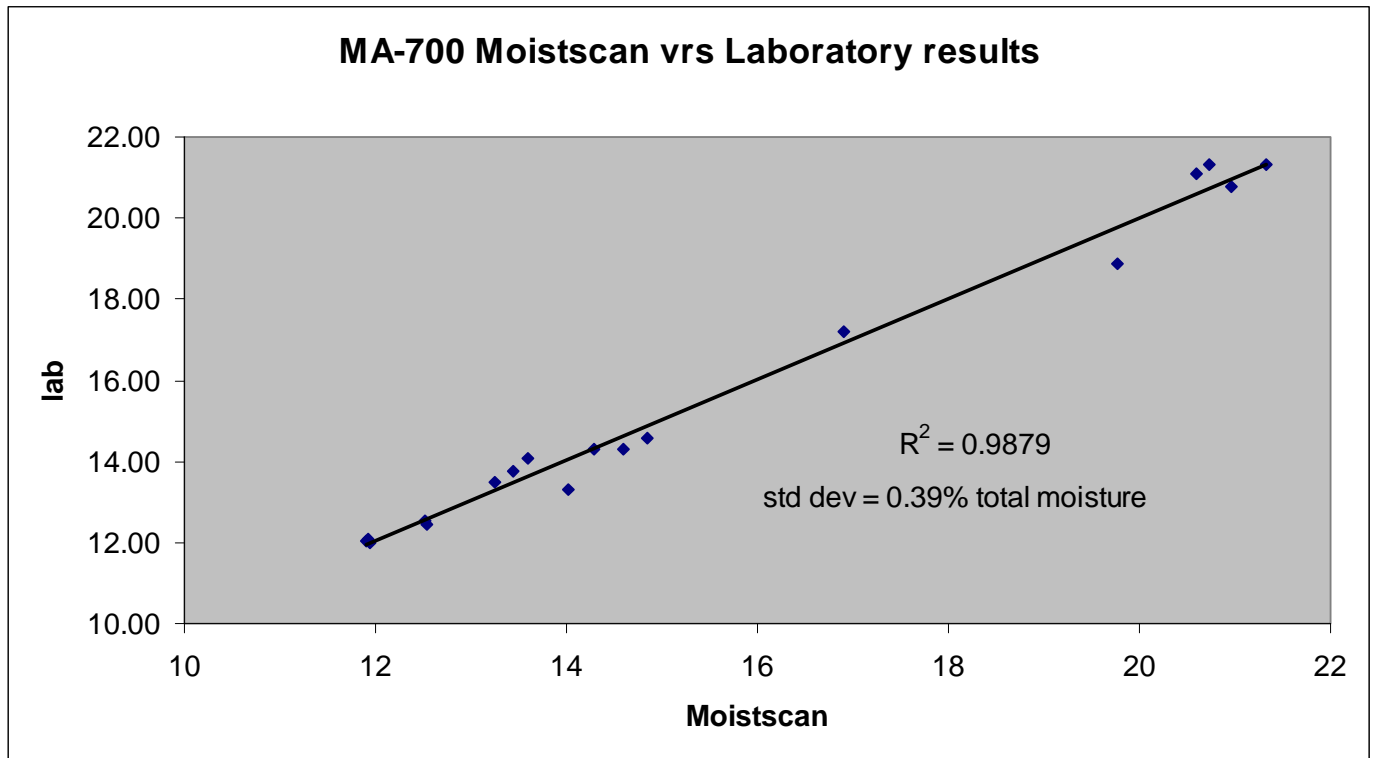
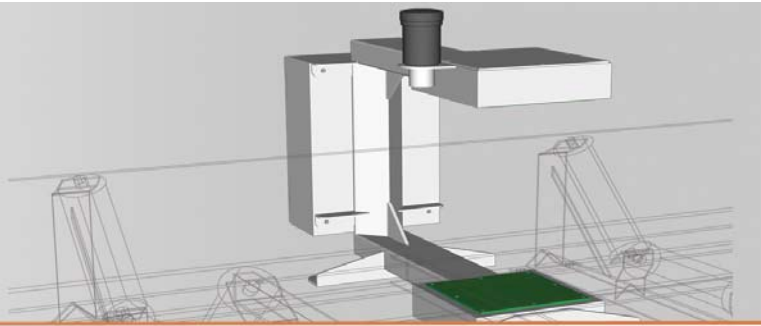


Figure 3: Calibration data for Polenta/Rice grit presented to the In-Pipe analyser



Moistscan located above extruder, hydrator is located above MoistScan[®] (off picture)